

RESEARCH ARTICLE

Who seeks sex therapy? Sexual dysfunction prevalence and correlates, and help-seeking among clinical and community samples

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Abstract

Sexual dysfunctions (SD; e.g., female sexual interest/arousal disorder, erectile disorder, female orgasmic disorder, delayed ejaculation, genito-pelvic pain/penetration disorder, etc.) affect up to a third of individuals, impairing sexuality, intimate relationships, and mental health. This study aimed to compare the prevalence of SDs and their sexual, relational, and psychological correlates between a sample of adults consulting in sex therapy ($n = 963$) and a community-based sample ($n = 1,891$), as well as examine barriers to sexual health services for SD and the characteristics of individuals seeking such services. Participants completed an online survey. Analyses showed that participants in the clinical sample reported lower levels of sexual functioning and sexual satisfaction and higher levels of psychological distress than participants in the community-based sample. Moreover, higher SD rates were related to lower relational satisfaction and higher psychological distress in the community sample, and to lower sexual satisfaction in both samples. Among participants in the community sample who sought professional services for SD, 39.6% reported that they were unable to access services, and 58.7% reported at least one barrier to receiving help. This study provides important data regarding the prevalence of SD and the link between SD and psychosexual health in clinical and nonclinical samples, as well as barriers to treatment access.

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Introduction

Prevalence of sexual dysfunctions

Sexual health is fundamental to well-being [1, 2]. However, sexual well-being has repeatedly been overshadowed in international public health agendas by other concerns like reproductive health and sexually transmitted infections [3, 4]. Yet, sexual dysfunctions (SD) are prevalent in the general population—impacting up to a third of adults regardless of age and gender [2, 5–10]. The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) [11] defines SD (e.g., male hypoactive sexual desire, erectile, or genito-pelvic pain/penetration disorders, etc.) as a significant impairment of sexual response and pleasure or as pain during intercourse, causing persistent (≥ 6 months) and clinically significant distress.

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In their systematic review, Lewis and colleagues [7] reported that, among women, 17 to 55% meet the criteria for sexual interest/arousal disorder, 16 to 25% for orgasmic disorder, and 14 to 27% for genito-pelvic or penetration-related pain. Among men, 8 to 18% meet the criteria for hypoactive sexual desire disorder, 10 to 40% for erectile disorder, 8 to 30% for premature ejaculation, 1 to 10% for delayed ejaculation, and 1 to 6% for genito-pelvic or penetration-related pain [7]. Variations in SD estimates across studies are mostly due to differences in SD screening criteria and sampling methods and composition (e.g., clinical versus nonclinical samples) [7, 8, 12]. Regarding screening criteria, most SD studies only assess impairment criteria (*symptom-level*; e.g., low desire, erectile difficulties, ejaculation or orgasm latency) rather than examine all DSM-5 diagnostic criteria (*disorder-level*, i.e., minimum duration of 6 months and the presence of personal distress) [11]. Measuring SD this way is problematic from an intervention standpoint, as many individuals report impaired sexual function without experiencing distress [13, 14]. For instance, in a random population-based sample ($n = 1,346$), Hendrickx and colleagues [15] have found that, while 44% of women and 35% of men reported moderate to severe sexual difficulties (symptom-level), these percentages decreased to 19% and 15% respectively, when the DSM-5's impairment duration and distress criteria were considered (disorder-level). Similarly, the Britain's third *National Survey of Sexual Attitudes and Lifestyles* ($n = 15,162$) [16] revealed that more than 40% of men and 50% of women report at least one sexual problem, but that only about 10% also feel distressed regarding their sex lives. Furthermore, many contextual factors (e.g., postpartum period, professional stressors, romantic breakup) can temporarily impact sexual functioning [17, 18] without reaching clinical thresholds.

Recent studies on sexual functioning among individuals seeking clinical services (e.g., sex therapy, gynecology, family medicine) are scarce [19–23]. Studies that have compared individuals consulting in sex therapy to those of the general population have found that the former report lower levels of sexual functioning than the latter [24–27]. Yet, additional comparative research that uses disorder-level definitions of SD is needed to better understand the experiences of individuals consulting in clinical settings and guide the development of tailored interventions.

Sexual, relational, and psychological correlates of sexual dysfunctions

SD impairs sexual and intimate relationships, as well as mental health [14]. Improving our understanding of the interactions between sexual functioning and relationship satisfaction is of great importance, given that about a third of men and women with low sexual functioning report being unsatisfied with their relationships [16]. SD has also been found to correlate negatively with sexual satisfaction [28–33]. Moreover, strong bidirectional associations between low sexual functioning and psychological distress were also found [16, 34]. However, findings regarding relationship satisfaction have been inconsistent, with some studies showing dyadic adjustment (i.e., relationship satisfaction) to be a key correlate of overall sexual functioning [9, 35–38], while other studies suggest that it is only weakly associated or unrelated with SD [20, 39]. These incongruencies highlight the need to further explore the links between SD and relationship satisfaction. What is more, most SD studies have examined specific subpopulations (e.g., separately by gender, individuals with a medical condition) [9, 28, 32] or specific SDs (e.g., lack of sexual interest) [28, 35], thereby failing to provide a comprehensive picture of SD correlates. Also, such studies did not compare clinical and nonclinical samples on SD correlates, limiting our understanding of possible specificities that could inform practice. Lastly, very few studies, to our knowledge, have explored whether rates of co-occurring SDs (i.e., comorbidity) are associated with increased sexual, relationship, and psychological distress [40]. Thus, the current scientific corpus presents partial or inconclusive findings on the

psychosexual well-being of individuals with one or multiple SDs, especially of individuals consulting in sex therapy.

Help-seeking for sexual dysfunctions and the characteristics of individuals who seek help

Although SDs are common, they remain under-reported and under-treated [3, 41]. In a large cross-national random population-based sample ($n = 27,500$), almost half of respondents (43% of men and 49% of women) had experienced at least one sexual difficulty in the last 12 months, though less than 20% had sought medical help for their problem [42]. Similarly, in a sample of women in the United States ($n = 701$), only half (53%) of those living with hypoactive sexual desire disorder sought professional help for their SD [22]. In another US female sample ($n = 3,807$; 18–75 years old), 40% ($n = 1,519$) of participants indicated not having sought medical help for SD-related complaints, although 54% reported that they would have wanted to do so [43].

While some research has documented individuals' reasons for not seeking professional help (e.g., perceptions that SD is a normal part of aging or that it is a taboo subject) [3, 44–47] few studies have explored help-seeking behaviors, barriers to treatment, and the characteristics of individuals who seek services for SD. Some barriers to treatment appear to be related to screening processes and healthcare providers' attitudes. In a sample of 300 gynecology patients (18–50 years old), while most (80%) reported wanting to be asked about their sexual health and functioning by their doctor, only one-third (36%) said their gynecologist had done so [48]. In a Swiss sample of gynecologists ($n = 341$), only 8% indicated routinely discussing sexual issues—including SD—with more than 80% of their patients [49].

Other potential barriers to sexual health services, such as structural (e.g., treatment costs, waiting times) and demographic factors (e.g., education, rurality), have been relatively under-explored. The few studies having examined such barriers have found age, education level [47], and gender [42] to be unrelated to seeking help for SD. By contrast, much research has been conducted on demographic (e.g., age, income, rurality) and structural barriers (e.g., waiting times, availability of services) to help-seeking behaviors and access for the treatment of non-sexual mental disorders (e.g., depression or anxiety disorders) [50–56]. Documenting help-seeking and its potential barriers and correlates is central to informing healthcare guidelines and policies [42]. It could allow for the identification of vulnerable subpopulations and foster the development of tailored strategies improving treatment access.

The current study

To address the limitations of the current literature, this study's aims were threefold: (1) to use disorder-level criteria to compare the prevalence of SD between a clinical sample of individuals consulting in sex therapy and a community-based sample; (2) to examine and compare sexual, relational, and psychological correlates of SD between samples; and (3) to examine help-seeking prevalence, barriers, and correlates in a community sample. We hypothesized that SD prevalence and levels of sexual, relational, and psychological distress would be higher among individuals consulting in sex therapy than in the community-based sample. Since the examination of help-seeking barriers and associated factors is descriptive and exploratory, no hypotheses were formulated.

Materials and methods

The present study was approved by the Université du Québec à Montréal's Institutional Ethics Review Board (approval number: 4829_e_2021; 1269_e_2017), and informed consent was obtained from each participant included in this study.

Sampling

Community sample. A non-probabilistic adult sample of 2,154 Québécois (Canada) individuals was recruited via social media (i.e., *Facebook* and *Instagram*) from June to September 2021. Participants were invited to complete an anonymous online survey on sexual health and well-being in either French or English. Specifically, the community-based survey comprised ten sections assessing participants' sexual difficulties (e.g., SD, problematic pornography consumption, sexualized drug use) and related issues (e.g., body shame, attachment insecurities, performance anxiety, sexual victimization), psychological and relational well-being, and barriers to treatment access. By clicking on the study link, participants were led to a consent form detailing the study's nature and objectives, which they needed to review and sign electronically. After providing electronic consent, participants accessed the survey, hosted on *Qualtrics*. The survey took about 30 to 40 minutes to complete. Of the 2,154 participants who provided consent, 87.8% ($n = 1,891$) met the inclusion criteria, namely: (1) being at least 18 years old, (2) having sufficient knowledge of either French or English, and (3) completing at least 70% of the measures of interest. Individuals who did not meet these criteria were excluded from the present study. Participants were eligible to enter a draw to win one of 30 gift-cards with a value ranging from \$25 to \$200 CAD.

Clinical sample. Participants were recruited at the Université du Québec à Montréal's sexuality clinic (Québec, Canada) from December 2012 to May 2022. Patients (all adults) were invited by interns to complete an online self-reported survey hosted on *Qualtrics* during the evaluation phase of their treatment [19], which notably assessed levels of sexual functioning, sexual and relationship satisfaction, and psychological well-being. The informed consent procedure was the same as the one used in the community sample. Patients were informed that their refusal to participate in the study would not affect the access or quality of their care. The questionnaire was available in French and in English. Of the 1,093 participants who consented to participate, 88.1% ($n = 963$) met the inclusion criteria (i.e., identical to those used in the community sample).

Measures

Sociodemographic characteristics. Sociodemographic data were collected on age, gender, sexual orientation, education, ethnicity, employment status, household income, relationship status, and religious practice and residential area (in the community sample only). The latter was assessed based on Statistics Canada's [57] method of classification, which uses individuals' postal codes.

Sexual dysfunctions. SD was assessed using the Arizona Sexual Experience Scale (ASEX) [58], which examines the experience of sexual difficulties throughout the sexual response cycle (e.g., sexual desire, erection/lubrication, orgasm) using a 6-point Likert scale ranging from 1 – *extremely easily/strong/satisfying* to 6 – *very difficult/weak/unsatisfying*. Lower scores represent greater levels of sexual functioning. Participants completed the version of the ASEX that corresponded to their genital sex rather than their gender (i.e., one's personal sense of being male, female, non-binary, etc.), as some ASEX items are sex-specific (e.g., vaginal lubrication; penile erection). Two questions were added to the original ASEX to measure other sexual difficulties (i.e., pain during sex and premature ejaculation/orgasm). To reflect the diagnostic criteria used in the DSM-5 [11], investigated sexual difficulties had to be present for at least 6 months and respondents were invited to indicate their associated levels of distress (1 – *no distress*, to 6 – *extreme distress*). In the present study, five SDs were examined: 1) low sexual desire/arousal, 2) difficulties with lubrication/erection, 3) premature ejaculation/orgasm, 4) delayed or absent ejaculation/orgasm, and 5) pain during sex. The ASEX showed satisfactory internal consistency in the community ($\alpha = .82$) and clinical samples ($\alpha = .75$).

Sexual satisfaction. The Global Measure of Sexual Satisfaction (GMSEX) [59] was used to assess overall sexual satisfaction. Participants rated their sexuality on five 7-point bipolar scales ranging from: Bad-Good, Unpleasant-Pleasant, Negative-Positive, Unsatisfying-Satisfying, and Worthless-Valuable. Total scores ranged from 5 to 35, with higher scores indicating greater sexual satisfaction. The measure yielded satisfactory internal consistency in both the community ($\alpha = .91$) and clinical samples ($\alpha = .89$).

Relationship satisfaction. Relationship satisfaction was measured using the short 4-item Dyadic Adjustment Scale (DAS-4) [60]. Respondents rated their current relationship on conflict frequency on a 6-point scale ranging from 0 *never* to 5 *always*, and on levels of relationship happiness on a 7-point scale ranging from 0 *extremely unhappy* to 6 *perfect*. Total scores ranged from 0 to 21. Higher scores reflect greater relationship satisfaction. Internal consistency was satisfactory for the community ($\alpha = .81$) and clinical samples ($\alpha = .75$).

Psychological distress. The 6-item K-6 Distress Scale [61] was used in the community sample to measure symptoms of anxiety and depression. Participants rated the frequency of their symptoms using a 5-point scale ranging from 0 *none of the time* to 4 *all the time*. Total scores ranged from 0 to 24. Internal consistency was $\alpha = .87$. The anxiety and depression subscales (8 items) of the Psychiatric Symptom Index [62] were used in the clinical sample. Participants rated the frequency of their symptoms on a 4-point scale ranging from 0 *never* to 3 *very frequently*. Total scores ranged from 0 to 24, with higher scores indicating greater psychological distress. Internal consistency was $\alpha = .89$.

Help-seeking. Participants in the community sample were asked to indicate whether they sought professional help for their sexual difficulties, the types of help sought, and the potential barriers they encountered. Questions on sexual healthcare use and barriers to care were created based on previous studies [45, 47, 51, 56].

Data processing and statistical analysis

To reflect the diagnostic criteria used in the DSM-5 [11], participants having selected at least 5 (very difficult/weak/unsatisfying) on a given ASEX sexual difficulty item with a score of at least 4 (moderate distress) for related distress were categorized as presenting that specific SD. Participants not meeting these criteria for a given SD were categorized as not having that specific SD. Total scores were used for the psychosexual variables (i.e., sexual and relationship satisfaction, and psychological distress).

Potential differences between samples on sociodemographic variables were explored using chi-square tests. Crude prevalence for each SD was calculated by dividing the total number of a given self-reported sexual problem by the total number of respondents. For each prevalence, 95% confidence intervals (CIs) were estimated using exact (Clopper-Pearson) confidence limits for a binomial proportion. Comparison analyses regarding SD prevalence and correlates were conducted using chi-square and independent samples *t*-tests. Associations between the number of reported SDs and all continuous psychosexual variables were tested using correlational analyses. Data on help-seeking and barriers to services are presented as frequencies and percentages. Missing data were omitted from analyses. Effect sizes were reported for each analysis (i.e., ϕ , Cohen's *d*, and *r*) [63]. All statistical analyses were performed using SPSS, version 27, except for the 95% CIs for the crude prevalence, which were computed using the R package binGroup [64].

Results

The demographic characteristics of the clinical ($n = 963$) and the community-based ($n = 1,891$) samples are summarized in Table 1. Samples slightly differed on age, sexual orientation, employment status, household income, and education level.

Table 1. Demographic characteristics of the community and clinical samples.

Variables	Community	Clinical	<i>p</i> -value (ϕ_c)
	(<i>n</i> = 1891)	(<i>n</i> = 963)	
	% (<i>n</i>)	% (<i>n</i>)	
Age			
18 to 34	38.2 (702)	57.5 (553)	< .001 (.19)
35 to 49	36.7 (676)	27.4 (293)	
50 and over	25.1 (762)	15.1 (145)	
Gender			
Cis Women	54.7 (1035)	57.0 (549)	<i>n.s.</i>
Cis Men	41.2 (779)	40.0 (385)	
Other (e.g., non-binary, trans, etc.)	4.1 (77)	3.0 (29)	
Sexual orientation			
Heterosexual	75.5 (1427)	76.6 (734)	.006 (.07)
Gai/Lesbian	5.4 (102)	5.9 (57)	
Bisexual/Pansexual	14.4 (272)	11.1 (106)	
Asexual	1.3 (24)	.7 (7)	
Other (e.g., queer)	3.5 (66)	5.6 (54)	
Employment status			
Employed or self-employed	70.7 (1335)	62.5 (563)	< .001 (.18)
Student	10.8 (203)	24.0 (216)	
Unemployed/leave of absence	10.8 (203)	9.2 (83)	
Retired	6.1 (115)	4.0 (36)	
Other (e.g., volunteer, caregiver)	1.6 (31)	.3 (3)	
Household annual income (CAD)			
< \$20,000	7.9 (123)	17.0 (125)	< .001 (.14)
\$20,000-\$59,999	33.4 (519)	34.1 (251)	
\$60,000-\$79,999	16.9 (263)	14.0 (103)	
\$80,000-\$99,999	16.0 (249)	13.3 (98)	
> \$100,000	25.8 (402)	21.5 (158)	
Relationship status			
Single	35.5 (666)	31.8 (304)	<i>n.s.</i>
In a relationship	64.5 (1210)	68.2 (651)	
Education level			
Elementary school	1.5 (29)	2.0 (19)	.038 (.06)
High school	17.1 (323)	13.8 (132)	
Vocational school or college	39.9 (754)	37.7 (362)	
Undergraduate	30.9 (584)	35.4 (340)	
Graduate	10.6 (201)	11.1 (107)	

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Objective 1: Examine group differences in SD prevalence

SD prevalence for both samples is summarized in Table 2. Overall, individuals in the clinical sample were more likely than their community-based counterparts to report at least one SD and to report SD comorbidity. Moreover, all examined SDs were statistically more prevalent in the clinical sample. Effect sizes were small ($\phi = .05$ to .17). Sample differences were particularly marked for low sexual desire/arousal (10.4% vs 18.9%, respectively) and delayed or absent orgasm/ejaculation (7.0% vs 18.6%, respectively). Symptom-level prevalence of at least one sexual impairment (i.e., *without* the distress criterion) was 30.1% in the community sample and

Table 2. Group differences in SD prevalence and psychosexual well-being.

Sexual dysfunctions	Community		Clinical		ϕ (95% CI)
	% (95% CI)	Valid n^\dagger	% (95% CI)	Valid n^\dagger	
No SD	80.4 (78.6–82.2)	1521	66.8 (63.7–69.7)	643	.16*** (.13-.20)
1 SD	13.3 (11.8–14.9)	251	19.1 (16.7–21.7)	184	
2 SDs	3.9 (3.0–4.8)	73	9.1 (7.4–11.1)	88	
3 or more SDs	2.4 (1.8–3.2)	46	5.0 (3.7–6.6)	48	
Lack of sexual desire/arousal	10.4 (9.0–11.8)	195	18.9 (16.5–21.5)	182	.12*** (.08-.16)
Erectile/lubrication difficulties	6.1 (5.0–7.3)	105	8.5 (6.8–10.5)	78	.05* (.01-.08)
Premature ejaculation or orgasm	1.1 (0.7–1.7)	21	3.8 (2.6–5.5)	28	.09*** (.04-.13)
Delayed or absent ejaculation/orgasm	7.0 (5.9–8.3)	128	18.6 (15.8–21.6)	136	.17*** (.13-.22)
Pain during sex	6.2 (5.0–7.6)	93	9.5 (7.8–11.6)	91	.06** (.02-.10)
Psychosexual variables	Community		Clinical		d (95% CI)
	M (SD)	Valid n^\dagger	M (SD)	Valid n^\dagger	
Sexual satisfaction	24.3 (6.8)	1541	22.0 (7.1)	649	.35*** (.25-.44)
Relationship satisfaction	13.4 (5.0)	1541	13.3 (3.1)	649	.03 (.06-.12)
Psychological distress	7.6 (4.7)	1621	9.5 (5.7)	943	.36*** (.28-.44)

Note.

* $p < .05$,

** $p < .01$,

*** $p < .001$.

† Valid n and % vary due to missing values (i.e., “prefer not to answer”).

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48.5% in the clinical sample, while disorder-level prevalence of at least one SD (i.e., *with* the distress criterion) was 19.6% in the community sample and 33.2% in the clinical sample.

Objective 2: Examine group differences in sexual, relational, and psychological correlates of SD

Respondents in the clinical sample reported significantly lower levels of sexual satisfaction and greater degrees of psychological distress than the community sample (see Table 2). Effect sizes were moderate ($d = .35$ to $.37$). Estimated means for relationship satisfaction did not differ between samples. Psychosexual correlates of SD for both samples are summarized in Table 3. In the community sample, correlation analyses showed that the number of reported SDs was negatively related to sexual and relationship satisfaction, and positively related to psychological distress. In the clinical sample, the number of SDs was negatively related to sexual satisfaction only. Moreover, sexual and relationship satisfaction and psychological distress were significantly intercorrelated in both samples. Correlations were weak to moderate ($r = .12$ to $.48$).

Objective 3: Examine help-seeking prevalence, barriers to services, and the characteristics of individuals seeking such services

One-fourth (26.6%) of participants in the community sample reported having sought professional services for their sexual difficulties (see Table 4). Of these participants, 60.4% said that they were able to receive such services. The professionals that were most sought out by participants were sex therapists (36.3%), general practitioners (18.9%), and psychologists (12.4%) (see Table 4). Most respondents who sought professional help experienced barriers to its access (58.7%), which were mainly high costs (25.9%), long waiting lists (25.0%), and being unable to receive appropriate information (16.4%).

Table 3. Psychosexual well-being correlates of sexual dysfunction by sample.

Variables	1	2	3	4	M	SD
Community (<i>n</i> = 1,891)						
1. Number of SDs (0–4) [†]	—	-.43***	-.12***	.19***	0.3	0.7
2. Sexual satisfaction (5–35)		—	.48***	-.31***	24.3	6.8
3. Relationship satisfaction (0–21)			—	-.25***	13.4	5.0
4. Psychological distress (0–24)				—	7.6	4.7
Clinical (<i>n</i> = 963)						
1. Number of SDs (0–4) [†]	—	-.36***	.03	.06	0.5	0.9
2. Sexual satisfaction (5–35)		—	.29***	-.21***	21.4	7.1
3. Relationship satisfaction (0–21)			—	-.28***	13.3	3.1
4. Psychological distress (0–24)				—	9.5	5.7

Note.

**p* < .05,

***p* < .01,

****p* < .001.

[†]As participants could not report both delayed/absent and premature orgasm, the maximum number of SDs a participant could report was four (out of five).

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Regarding demographic characteristics, individuals who sought services were more likely to be cisgender men and trans and non-binary individuals, be non-heterosexual, adhere to a religious practice, and to be in a relationship (Table 5). No differences were found between people who sought services and those who had not with regards to age, employment status, household income, ethnicity, residential area, and education level. Respondents who had

Table 4. Help-seeking behaviors and barriers to services among the community sample (*n* = 1,688).

Variables	% (<i>n</i>)
Have ever sought help	26.6 (449)
Were able to receive help	60.4 (271)
Professionals sought for help	
General practitioner	18.9 (49)
Medical specialist (urologist, gynecologist)	10.4 (271)
Psychologist	12.4 (32)
Sex therapist	36.3 (94)
Nurse	4.6 (12)
Physiotherapist	3.5 (9)
Social worker	3.5 (9)
Massage therapist	1.9 (5)
Other	8.5 (22)
Reported no barriers	41.3 (177)
Reported barriers	58.7 (252)
Too costly	25.9 (65)
Long waiting lists	25.0 (63)
Unable to receive appropriate information	16.4 (41)
Unable to get an appointment	9.9 (25)
Scheduling conflicts with work	5.6 (14)
Family responsibilities	3.2 (8)
Other	14.0 (36)

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Table 5. Demographic and psychosexual correlates of sexual health service-seeking in the community sample (*n* = 1,688).

	Sought services	Did not seek services	ϕ (95% CI)
Demographic variables	% (<i>n</i>)	% (<i>n</i>)	
Age			.03 (.01-.08)
18 to 34	36.6 (161)	40.1 (482)	
35 to 49	38.0 (167)	35.3 (424)	
50 and over	25.5 (112)	24.6 (296)	
Gender			.07* (.03-.13)
Cisgender women	50.1 (225)	57.9 (718)	
Cisgender men	44.3 (199)	38.2 (473)	
Other (e.g., non-binary, trans, etc.)	5.6 (25)	3.9 (48)	
Sexual orientation			.11*** (.07-.17)
Heterosexual	67.3 (302)	77.2 (957)	
Gay/Lesbian	6.7 (30)	4.7 (58)	
Bisexual/Pansexual	18.3 (82)	13.0 (161)	
Asexual	0.9 (4)	1.2 (15)	
Questioning/Other (e.g., queer)	6.9 (31)	3.9 (48)	
Employment status			.05 (.03-.11)
Employed or self-employed	70.4 (316)	69.6 (859)	
Unemployed	3.1 (14)	4.6 (57)	
Student	10.5 (47)	10.7 (132)	
Retired	6.5 (29)	6.1 (75)	
Sick leave	4.0 (18)	2.8 (34)	
Other (e.g., volunteering, caregiver)	5.6 (25)	6.3 (78)	
Household annual income (CAD)			.02 (.04-.12)
< \$50,000	24.1 (108)	26.7 (329)	
> \$50,000	65.6 (294)	62.8 (773)	
Missing data	10.3 (46)	10.5 (129)	
Ethnicity			.01 (-.04-.06)
White	94.4 (424)	94.0 (1165)	
Non-white	5.6 (25)	6.0 (74)	
Residential area			.04 (.01-.09)
Metropolitan area	67.8 (284)	66.8 (750)	
Other urban areas	9.3 (39)	11.8 (132)	
Rural	22.9 (96)	21.5 (241)	
Adheres to a religious practice			.06** (.01-.12)
Yes	19.4 (87)	14.2 (176)	
No	80.6 (362)	85.8 (1061)	
Relationship status			.06* (.02-.12)
Single	36.2 (162)	33.7 (416)	
In a relationship	60.3 (270)	64.5 (797)	
Other	3.6 (16)	1.8 (22)	
Education level			.04 (.02-.10)
Elementary/High school	16.3 (73)	18.6 (231)	
Vocational school or college	38.8 (174)	39.5 (489)	
Undergraduate	32.3 (145)	31.6 (392)	
Graduate	12.7 (57)	10.3 (127)	
	Sought services	Did not seek services	<i>p</i> (<i>d</i>)

(Continued)

Table 5. (Continued)

	Sought services	Did not seek services	ϕ (95% CI)
Demographic variables	% (n)	% (n)	
Psychosexual variables	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	
Number of SDs	0.7 (1.1)	0.3 (.7)	.48*** (.59-.37)
Sexual satisfaction	22.8 (7.0)	24.8 (6.7)	.28*** (.17-.40)
Relationship satisfaction	12.8 (5.1)	13.5 (5.0)	.15** (.04-.26)
Psychological distress	8.20 (4.9)	7.4 (4.7)	-.16** (.27-.05)

Note.

* $p < .05$,

** $p < .01$,

*** $p < .001$.

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sought services reported significantly more SDs, lower levels of sexual and relationship satisfaction, and higher psychological distress compared to those who had not. Effect sizes for significant differences were low to moderate ($\phi = .06$ to $.11$; $d = .15$ to $.48$).

Discussion

The present study compared the prevalence and correlates of SD between a clinical and a community sample, as well as examined help-seeking behaviors for SD, barriers to services, and individual characteristics associated with seeking professional services. That the clinical sample reported more SDs and were more likely to have used sex therapy services than the community sample is consistent with the finding that experiencing sexual difficulties is an important motive seeking sex therapy [18, 19]. More specifically, 9 to 19% of individuals in our clinical sample reported at least one SD, compared to 6 to 10% of individuals in our community sample. Rates of disorder-level SD in both samples are consistent with those found in other clinical [65] and community samples [15, 66–68], which suggests that they may be considered as reliable estimates of SD prevalence in community and clinical populations. The observed SDs prevalence confirmed that low sexual functioning represents an important public health issue, which may inform healthcare policies and guide clinicians (e.g., psychologists, general practitioners) during the screening process. Further, given the disparity between symptom- and disorder-level SD prevalence (i.e., a 3:2 ratio), the present findings underscore the importance of also using the distress criterion in SD research. Results also show that sex therapy clients report higher levels of psychological distress and lower levels of sexual satisfaction relative to individuals from the community, which is congruent with prior research [27, 69, 70]. Unexpectedly, both samples presented similar levels of relationship satisfaction. Observed DAS-4 means in both groups (i.e., community: 13.4, clinical: 13.3) fall between mean scores found in other sex therapy (<12) [60, 71] and non-clinical samples (> 15) [72–74], and are near threshold levels of those of clinically distressed couples (DAS-4 < 13) [60]. This finding suggests that relationship distress may not be specific to sex therapy clients. However, it is also possible that the COVID-19 pandemic, which occurred during the recruitment phase of the community sample, may have contributed to this sample's lower levels of relational satisfaction compared to those found in previous population-based samples. Studies exploring the pandemic's impact on relationships have indeed revealed increased sexual and relational distress and conflict between partners, as well as decreased relationship quality and frequency of intimate and sexual behaviors following the onset of the pandemic [75–78].

Consistent with other studies [32, 79], SD was associated with sexual and relational dissatisfaction and psychological distress, at least in the community sample. However, in the clinical sample, only sexual satisfaction was significantly related to lower numbers of reported SDs. This finding might be partially explained by the effect of confounding variables, such as financial hardship and adverse relational experiences (e.g., sexual assault, partner violence), both of which are particularly prevalent among sex therapy clients [19, 80] and have been found to be negatively associated with mental health and relational well-being [81, 82]. Since we found relational well-being to be more strongly related to sexual satisfaction than to sexual function in both samples, dyadic adjustment might be a less reliable indicator of sexual functioning than other relational factors such as (sexual) communication, sexual compatibility, partner's sexual functioning or sexual skills, relational avoidance, romantic attachment, or levels of conflicts or coercion [8, 83–87]. Overall, in both samples, these findings confirm the particularly strong link between sexual functioning and sexual satisfaction [88], warranting their concurrent assessment in clinical and research settings.

The present study also found sex therapists to be the most consulted professionals—with one-third of respondents having sought these providers—followed by physicians (general practitioners and specialists combined; 29%) and psychologists (12%). While most respondents were able to access care for their SD, results suggest that nearly 6 out of 10 participants encountered barriers in accessing treatment. These findings highlight the importance of increased accessibility to affordable sexual health services, notably by addressing the identified structural barriers (e.g., long waiting times, cost of services). Moreover, individuals who sought services were mostly similar to those who did not in terms of sociodemographic characteristics. Only small differences were found in relation to gender, religious practice, and relationship status. This finding is consistent with that of previous studies [42, 47]. By contrast, respondents who had sought services reported significantly more SDs, lower sexual and relationship satisfaction, as well as higher psychological distress than individuals who had not sought services, suggesting that these factors may be more relevant to sexual health service-seeking than sociodemographic characteristics.

Strengths and limitations

There has been little research comparing SD prevalence and their associated factors between clinical and community samples, especially using disorder-level DSM-5 criteria. Moreover, this study provides additional insights in the emerging research field of help-seeking for sexual difficulties and barriers to services. The study's strengths also include its large, sexually- and gender-diverse samples.

Nonetheless, several limitations need to be considered. First, the study's cross-sectional design precludes the drawing of any conclusions regarding the causality and directionality of the relationships between the examined variables. Second, the samples slightly differed on demographic characteristics (e.g., age, household income). Consequently, the findings should be interpreted with caution. Third, SD prevalence was estimated using self-reported questionnaires rather than official diagnostic records or clinical interviews. Thus, the results may be subject to social desirability and recall biases. Fourth, part of the recruitment occurred during the COVID-19 pandemic, which has impacted many individuals' sex lives and relationships [76], thus affecting the findings' generalizability to other contexts. Finally, structural barriers to treatment are intimately connected to the social and cultural contexts in which the study takes place (e.g., access to healthcare services and sexual education). Nevertheless, results suggest that when sex therapists are available, they tend to be favored over general practitioners and psychologists.

Conclusion

The present research expanded the current SD literature by comparing clinical and community samples using a disorder-level definition of SD (i.e., persistent impaired sexual functioning causing significant distress), as previous studies have mainly examined the prevalence of SD symptoms rather than disorders as defined by the DSM-5 [2, 10, 16] in a single sample or in specific subpopulations (e.g., individuals suffering from a specific SD or medical condition) [89, 90]. Further, by examining demographic characteristics linked to help-seeking for SD as well as barriers to professional services, the current study contributes to the existing literature on help-seeking and treatment access, which has primarily focused on non-sexual mental health disorders [50, 53, 55]. Further research across multiple national and cultural contexts could shed additional light on barriers to sexual health services, as well as examine how the COVID-19 pandemic might have exacerbated SDs and influenced help-seeking behaviors. Future qualitative studies using in-depth interviews with individuals experiencing SDs (and eventually, with their partners) would allow for a more comprehensive understanding of their trajectory towards sexual health services and underlying barriers and motivations. Also, relationship between SD and medical conditions (e.g., endometriosis, infertility, cancer, urinary incontinence) [91–94] and other mental disorders (e.g., major depressive disorder, generalized anxiety disorder, substance use disorders) [95–97] should be investigated more thoroughly to provide a more comprehensive and multifaceted clinical picture of SD risk factors and comorbidities. Doing so could also provide further insight regarding the indirect sexual health service trajectories of individuals living with SDs, as many such individuals first seek help for a non-sexual condition (e.g., endometriosis, depression, etc.) that can negatively impact sexual function. Finally, additional research could examine whether the nature of the motive of consultation (e.g., sexual or mental health disorder) influences help-seeking behaviors, as well as explore other potential associated factors, such as stigma and sex education.

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References

1. Glasier A, Gulmezoglu AM, Schmid GP, Garcia Moreno C, Van Look PFA. Sexual and reproductive health: a matter of life and death. *Lancet*. 2006; 368(9547):1595–607. [https://doi.org/10.1016/S0140-6736\(06\)69478-6](https://doi.org/10.1016/S0140-6736(06)69478-6) PMID: 17084760
2. Lee DM, Nazroo J, O'Connor DB, Blake M, Pendleton N. Sexual health and well-being among older men and women in England: findings from the English longitudinal study of ageing. *Arch Sex Behav*. 2016; 45(1):133–44. <https://doi.org/10.1007/s10508-014-0465-1> PMID: 25624001
3. Azar M, Bradbury-Jones C, Kroll T. Patterns of help-seeking in women when problems arise in their sexual life: a discussion paper. *Journal of Clinical Nursing*. 2013; 22(23–24):3587–96. <https://doi.org/10.1111/jocn.12374> PMID: 24028212
4. World Health Organization. Thirteenth General Programme of Work, 2019–2023. Switzerland: World Health Organization; 2018.
5. Graham CA, Štulhofer A, Lange T, Hald GM, Carvalheira AA, Enzlin P, et al. Prevalence and predictors of sexual difficulties and associated distress among partnered, sexually active older women in Norway, Denmark, Belgium, and Portugal. *Arch Sex Behav*. 2020; 49(8):2951–61. <https://doi.org/10.1007/s10508-020-01742-7> PMID: 32533517
6. Hendrickx L, Gijs L, Enzlin P. Age-related prevalence rates of sexual difficulties, sexual dysfunctions, and sexual distress in heterosexual women: results from an online survey in Flanders. *J Sex Med*. 2015; 12(2):424–35. <https://doi.org/10.1111/jsm.12725> PMID: 25345486
7. Lewis RW, Fugl-Meyer KS, Corona G, Hayes RD, Laumann EO, Moreira ED Jr, et al. Definitions/epidemiology/risk factors for sexual dysfunction. *J Sex Med*. 2010; 7(4 Part 2):1598–607. <https://doi.org/10.1111/j.1743-6109.2010.01778.x> PMID: 20388160
8. McCabe MP, Sharlip ID, Lewis R, Atalla E, Balon R, Fisher A, et al. Incidence and prevalence of sexual dysfunction in women and men: a consensus statement from the fourth international consultation on sexual medicine 2015. *J Sex Med*. 2016; 13(2):144–52. <https://doi.org/10.1016/j.jsxm.2015.12.034> PMID: 26953829
9. Mernone L, Fiacco S, Ehlert U. Psychobiological factors of sexual functioning in aging women: findings from the women 40+ healthy aging study. *Front Psychology*. 2019; 10:546. <https://doi.org/10.3389/fpsyg.2019.00546> PMID: 30918494
10. Quinn-Nilas C, Milhausen RR, McKay A, Holzapfel S. Prevalence and predictors of sexual problems among midlife canadian adults: results from a national survey. *J Sex Med*. 2018; 15(6):873–9. <https://doi.org/10.1016/j.jsxm.2018.03.086> PMID: 29753802
11. American Psychiatry Association. Diagnostic and statistical manual of mental disorders: DSM-5. Arlington, VA: American Psychiatric Association; 2013. <http://dsm.psychiatryonline.org/>
12. Martin SA, Atlantis E, Lange K, Taylor A, O'Loughlin P, Wittert G. Predictors of sexual dysfunction incidence and remission in men. *J Sex Med*. 2014; 11(5):1136–47. <https://doi.org/10.1111/jsm.12483> PMID: 24548342
13. Hayes RD. Assessing female sexual dysfunction in epidemiological studies: why is it necessary to measure both low sexual function and sexually-related distress? *Sex Health*. 2008; 5(3):215–8. <https://doi.org/10.1071/sh08016> PMID: 18828251
14. Wincze JJ, Weiberg RB. *Sexual Dysfunction: A Guide for Assessment and Treatment*. Third ed. United States: Guilford Publications; 2015: 230.
15. Hendrickx L, Gijs L, Enzlin P. Sexual difficulties and associated sexual distress in Flanders (Belgium): a representative population-based survey study. *J Sex Med*. 2016; 13(4):650–68. <https://doi.org/10.1016/j.jsxm.2016.01.014> PMID: 27045262
16. Mitchell KR, Mercer CH, Ploubidis GB, Jones KG, Datta J, Field N, et al. Sexual function in Britain: findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *Lancet*. 2013; 382(9907):1817–29. [https://doi.org/10.1016/S0140-6736\(13\)62366-1](https://doi.org/10.1016/S0140-6736(13)62366-1) PMID: 24286787
17. Brotto L, Atallah S, Johnson-Agbakwu C, Rosenbaum T, Abdo C, Byers SE, et al. Psychological and interpersonal dimensions of sexual function and dysfunction. *J Sex Med*. 2016; 13(4):538–71. <https://doi.org/10.1016/j.jsxm.2016.01.019> PMID: 27045257
18. Hall SK, Binik YM. *Principles and practice of sex therapy*. United States: Guilford Publications; 2020: 536
19. Lafrenaye-Dugas AJ, Hébert M, Godbout N. Profiles of medical services use and health status in sex therapy clients: associations with therapeutic alliance, attachment and trauma. *Canadian Journal of Human Sexuality*. 2021; 29(3):263–74. <https://doi.org/10.3138/cjhs.2019-0045>

20. Peloquin K, Callaci M, Byers SE, Tremblay N. Sexual portrait of couples seeking relationship therapy. *J Marital Fam Ther.* 2019; 45(1):120–33. <https://doi.org/10.1111/jmft.12328> PMID: 29577354
21. Rosen RC, Taylor JF, Leiblum SR, Bachmann GA. Prevalence of sexual dysfunction in women: Results of a survey study of 329 women in an outpatient gynecological clinic. *J Sex Marital Ther.* 1993; 19(3):171–88. <https://doi.org/10.1080/00926239308404902> PMID: 8246273
22. Rosen RC, Connor MK, Miyasato G, Link C, Shifren JL, Fisher WA, et al. Sexual desire problems in women seeking healthcare: A novel study design for ascertaining prevalence of hypoactive sexual desire disorder in clinic-based samples of U.S. women. *J Womens Health.* 2012; 21(5):505–15. <https://doi.org/10.1089/jwh.2011.3002> PMID: 22229714
23. Pakpour AH, Yekaninejad MS, Zeidi IM, Burri A. Prevalence and risk factors of the female sexual dysfunction in a sample of infertile Iranian women. *Arch Gynecol Obstet.* 2012; 286(6):1589–96. <https://doi.org/10.1007/s00404-012-2489-x> PMID: 22850887
24. Clayton AH, McGarvey EI, Clavet GJ, Piazza L. Comparison of sexual functioning in clinical and non-clinical populations using the Changes in Sexual Function Questionnaire (CSFQ). *Psychopharmacol Bull.* 1997; 33:747–53.
25. Mazer NA, Leiblum SR, Rosen RC. The Brief Index of Sexual Functioning for Women (BISF-W): A new scoring algorithm and comparison of normative and surgically menopausal populations. *Menopause.* 2000; 7(5):350–63. <https://doi.org/10.1097/00042192-200007050-00009> PMID: 10993034
26. Syrjala KL, Schroeder TC, Abrams JR, Atkins TZ, Brown WS, Sanders JE, et al. Sexual function measurement and outcomes in cancer survivors and matched controls. *J Sex Res.* 2000; 37(Part 3):213–25. <https://doi.org/10.1080/00224490009552042>
27. Veale D, Miles S, Read J, Troglia A, Wylie K, Muir G. Sexual functioning and behavior of men with body dysmorphic disorder concerning penis size compared with men anxious about penis size and with controls: a cohort study. *J Sex Med.* 2015; 3(3):147–55. <https://doi.org/10.1002/sm2.63> PMID: 26468378
28. Carvalheira A, Traeen B, Stulhofer A. Correlates of men's sexual interest: a cross-cultural study. *J Sex Med.* 2014; 11(1):154–64. <https://doi.org/10.1111/jsm.12345> PMID: 24344639
29. Heiman JR, Long JS, Smith SN, Fisher WA, Sand MS, Rosen RC. Sexual satisfaction and relationship happiness in midlife and older couples in five countries. *Arch Sex Behav.* 2011; 40(4):741–53. <https://doi.org/10.1007/s10508-010-9703-3> PMID: 21267644
30. Lafortune D, Dussault É, Philibert M, Godbout N. Prevalence and correlates of sexual aversion: A Canadian community-based study. *J Sex Med.* 2022; 19(8):1269–80. <https://doi.org/10.1016/j.jsxm.2022.05.142> PMID: 35750625
31. Meston C, Trapnell P. Development and validation of a five-factor sexual satisfaction and distress scale for women: The Sexual Satisfaction Scale for Women (SSS-W). *J Sex Med.* 2005; 2(1):66–81. <https://doi.org/10.1111/j.1743-6109.2005.20107.x> PMID: 16422909
32. Mota RL, Fonseca R, Santos JC, Covita AM, Marques N, Matias P, et al. Sexual dysfunction and satisfaction in kidney transplant patients. *J Sex Med.* 2019; 16(7):1018–28. <https://doi.org/10.1016/j.jsxm.2019.03.266> PMID: 31010779
33. Nappi RE, Cucinella L, Martella S, Rossi M, Tiranini L, Martini E. Female sexual dysfunction (FSD): Prevalence and impact on quality of life (QoL). *Maturitas.* 2016; 94:87–91. <https://doi.org/10.1016/j.maturitas.2016.09.013> PMID: 27823751
34. Atlantis E, Sullivan T. Bidirectional association between depression and sexual dysfunction: a systematic review and meta-analysis. *J Sex Med.* 2012; 9(6):1497–507. <https://doi.org/10.1111/j.1743-6109.2012.02709.x> PMID: 22462756
35. Carvalho J, Nobre P. Gender issues and sexual desire: the role of emotional and relationship variables. *J Sex Med.* 2010; 7(7):2469–78. <https://doi.org/10.1111/j.1743-6109.2009.01689.x> PMID: 20102479
36. Öberg K, Sjögren Fugl-Meyer KS. On Swedish women's distressing sexual dysfunctions: some concomitant conditions and life satisfaction. *J Sex Med.* 2005; 2(2):169–80. <https://doi.org/10.1111/j.1743-6109.2005.20226.x> PMID: 16422883
37. Pazmany E, Bergeron S, Verhaeghe J, Van Oudenhove L, Enzlin P. Dyadic sexual communication in pre-menopausal women with self-reported dyspareunia and their partners: associations with sexual function, sexual distress and dyadic adjustment. *J Sex Med.* 2015; 12(2):516–28. <https://doi.org/10.1111/jsm.12787> PMID: 25475508
38. Vannier SA, Rosen NO. Sexual distress and sexual problems during pregnancy: associations with sexual and relationship satisfaction. *J Sex Med.* 2017; 14(3):387–95. <https://doi.org/10.1016/j.jsxm.2016.12.239> PMID: 28143716
39. Jodoin M, Bergeron S, Khalifé S, Dupuis MJ, Desrochers Gv, Leclerc B. Male partners of women with provoked vestibulodynia: Attributions for pain and their implications for dyadic adjustment, sexual

- satisfaction, and psychological distress. *J Sex Med.* 2008; 5(12):2862–70. <https://doi.org/10.1111/j.1743-6109.2008.00950.x> PMID: 18637992
40. Wiegel M, Meston C, Rosen R. The female sexual function index (FSFI): cross-validation and development of clinical cutoff scores. *J Sex Marital Ther.* 2005; 31(1):1–20. <https://doi.org/10.1080/00926230590475206> PMID: 15841702
 41. Bagherzadeh R, Gharibi T, Kamali F, Khoramroudi R, Zahmatkeshan N, Akaberian S, et al. Prevalence of female sexual dysfunction and related factors for under treatment in bushehrian women of Iran. *Sexuality & Disability.* 2010; 28(1):39–49. <https://doi.org/10.1007/s11195-010-9149-5>
 42. Moreira ED, Brock G, Glasser DB, Nicolosi A, Laumann EO, Paik A, et al. Help-seeking behaviour for sexual problems: The global study of sexual attitudes and behaviors. *Int J Clin Pract.* 2005; 59(1):6–16. <https://doi.org/10.1111/j.1742-1241.2005.00382.x> PMID: 15707457
 43. Berman L, Berman J, Felder S, Pollets D, Chhabra S, Miles M, et al. Seeking help for sexual function complaints: what gynecologists need to know about the female patients' experience. *Fertility and Sterility—International Edition.* 2003; 79(3):572–6. [https://doi.org/10.1016/s0015-0282\(02\)04695-2](https://doi.org/10.1016/s0015-0282(02)04695-2) PMID: 12620442
 44. Donaldson RL, Meana M. Early dyspareunia experience in young women: confusion, consequences, and help-seeking barriers. *J Sex Med.* 2011; 8(3):814–23. <https://doi.org/10.1111/j.1743-6109.2010.02150.x> PMID: 21143423
 45. Ibine B, Ametepe LS, Okere M, Anto-Ocrah M. "I did not know it was a medical condition": Predictors, severity and help seeking behaviors of women with female sexual dysfunction in the Volta region of Ghana. *PLoS One.* 2020; 15(1). <https://doi.org/10.1371/journal.pone.0226404> PMID: 31929541
 46. Rodler S, von Büren J, Buchner A, Stief C, Elkhanova K, Wülfing C, et al. Epidemiology and treatment barriers of patients with erectile dysfunction using an online prescription platform: A cross-sectional study. *J Sex Med.* 2020; 8(3):370–7. <https://doi.org/10.1016/j.esxm.2020.04.001> PMID: 32434669
 47. Tinetti A, Weir N, Tangyotkajohn U, Jacques A, Thompson J, Briffa K. Help-seeking behaviour for pelvic floor dysfunction in women over 55: Drivers and barriers. *Int Urogynecol J.* 2018; 29(11):1645–53. <https://doi.org/10.1007/s00192-018-3618-2> PMID: 29552740
 48. Briedite I, Ancane G, Ancans A, Erts R. Insufficient assessment of sexual dysfunction: A problem in gynecological practice. *Medicina.* 2013; 49(7):49. PMID: 24375243
 49. Kottmel A, Ruether-Wolf KV, Bitzer J. Do gynecologists talk about sexual dysfunction with their patients? *J Sex Med.* 2014; 11(8):2048–54. <https://doi.org/10.1111/jsm.12603> PMID: 24903187
 50. Aguirre AA, Santa Cruz IS, Billings J, Jimenez M, Rowe S. What are the barriers, facilitators and interventions targeting help-seeking behaviours for common mental health problems in adolescents? A systematic review. *BMC Psychiatry.* 2020; 20(1):1–22. <https://doi.org/10.1186/s12888-020-02659-0> PMID: 32527236
 51. Andersson LMC, Schierenbeck I, Strumpher J, Krantz G, Topper K, Backman G, et al. Help-seeking behaviour, barriers to care and experiences of care among persons with depression in Eastern Cape, South Africa. *J Affect Disord.* 2013; 151(2):439–48. <https://doi.org/10.1016/j.jad.2013.06.022> PMID: 23890669
 52. Andrade LH, Alonso J, Mneimneh Z, Wells JE, Al-Hamzawi A, Borges G, et al. Barriers to mental health treatment: results from the WHO World Mental Health surveys. *Psychol Med.* 2014; 44(6):1303–17. <https://doi.org/10.1017/S0033291713001943> PMID: 23931656
 53. Cheesmond NE, Davies K, Inder KJ. Exploring the role of rurality and rural identity in mental health help-seeking behavior: a systematic qualitative review. *Journal of Rural Mental Health.* 2019; 43(1):45–59. <https://doi.org/10.1037/rmh0000109>
 54. Hom MA, Stanley IH, Joiner TE. Evaluating factors and interventions that influence help-seeking and mental health service utilization among suicidal individuals: a review of the literature. *Clin Psychol Rev.* 2015; 40:28–39. <https://doi.org/10.1016/j.cpr.2015.05.006> PMID: 26048165
 55. Hom Mh, Stanley IH, Schneider ME, Joiner TE. A systematic review of help-seeking and mental health service utilization among military service members. *Clin Psychol Rev.* 2017; 53:59–78. <https://doi.org/10.1016/j.cpr.2017.01.008> PMID: 28214634
 56. Perreault M, Lafortune D, Laverdure A, Chartier-Otis M, Belanger C, Marchand A, et al. Obstacles de l'accès au traitement rapportés par des personnes aux prises avec un trouble anxieux. *Can J Psychiatry.* 2013; 58(5):300–5. <https://doi.org/10.1177/070674371305800508> PMID: 23756290
 57. Statistics Canada. Dictionary: Census of Population. Ottawa; 2021.
 58. McGahuey CA, Gelenberg AJ, Laukes CA, Moreno FA, Delgado PL, McKnight KM et al. The Arizona Sexual Experience Scale (ASEX): Reliability and validity. *J Sex Marital Ther.* 2000; 26(1):25–40. <https://doi.org/10.1080/009262300278623> PMID: 10693114

59. Lawrance KA, Byers SE. Sexual satisfaction in long-term heterosexual relationships: The interpersonal exchange model of sexual satisfaction. *Personal Relationships*. 1995; 2(4):267–85. <https://doi.org/10.1111/j.1475-6811.1995.tb00092.x>
60. Sabourin S, Valois P, Lussier Y. Development and validation of a brief version of the Dyadic Adjustment Scale with a nonparametric item analysis model. *Psychol Assess*. 2005; 17(1):15–27. <https://doi.org/10.1037/1040-3590.17.1.15> PMID: 15769225
61. Kessler RC, Barker PR, Colpe LJ, Epstein JF, Gfroerer JC, Hiripi E, et al. Screening for serious mental illness in the general population. *JAMA Psychiatry*. 2003; 60(2):184–9. <https://doi.org/10.1001/archpsyc.60.2.184> PMID: 12578436
62. Iffeld FW. Further validation of a psychiatric symptom index in a normal population. *Psychol Rep*. 1976; 39:1215–28. <https://doi.org/10.2466/pr0.1976.39.3f.1215>
63. Cohen J *Statistical power analysis for the behavioral sciences*. New York: Academic Press; 1977. <http://site.ebrary.com/id/10996654>.
64. Zhang B, Bilder C, Biggerstaff B, Schaarschmidt F, Hitt B. BinGroup: Evaluation and experimental design for binomial group testing (R package version 2.2–1) [Computer software] 2018.
65. Enzlin P, Mathieu C, Van den Bruel A, Vanderschueren D, Demyttenaere K. Prevalence and predictors of sexual dysfunction in patients with type 1 diabetes. *Diabetes Care*. 2003; 26(2):409–14. <https://doi.org/10.2337/diacare.26.2.409> PMID: 12547871
66. Briken P, Matthiesen S, Pietras L, Wiessner C, Klein V, Reed GM, et al. Estimating the prevalence of sexual dysfunction using the new ICD-11 guidelines: Results of the first representative, population-based German health and sexuality survey (GeSiD). *Deutsches Arzteblatt International*. 2020; 117(39):653–8. <https://doi.org/10.3238/arztebl.2020.0653> PMID: 33357346
67. Burri A, Spector T. Recent and lifelong sexual dysfunction in a female UK population sample: Prevalence and risk factors. *J Sex Med*. 2011; 8(9):2420–30. <https://doi.org/10.1111/j.1743-6109.2011.02341.x> PMID: 21676186
68. Christensen BS, Grønbaek M, Osler M, Pedersen B, Graugaard C, Frisch M. Sexual dysfunctions and difficulties in Denmark: Prevalence and associated sociodemographic factors. *Arch Sex Behav*. 2011; 40(1):121–32. <https://doi.org/10.1007/s10508-010-9599-y> PMID: 20169469
69. Pascoal PM, Sanchez DT, Raposo CF, Pechorro P. Initial validation of the sexual pleasure scale in clinical and non-clinical samples of partnered heterosexual people. *J Sex Med*. 2016; 13(9):1408–13. <https://doi.org/10.1016/j.jsxm.2016.06.010> PMID: 27555510
70. Rust J, Golombok S. The GRISS: a psychometric instrument for the assessment of sexual dysfunction. *Arch Sex Behav*. 1986; 15(2):157–65. <https://doi.org/10.1007/BF01542223> PMID: 3718204
71. Lefebvre AA, Dugal C, Brassard A, Lussier Y, Lafontaine MF, Godbout N, et al. The role of relationship dissatisfaction in the dyadic associations between attachment insecurity and intimate partner violence among couples seeking therapy. *J Marital Fam Ther*. 2021; 47(4): 982–98. <https://doi.org/10.1111/jmft.12537> PMID: 34190347
72. Burns W, Péloquin K, Rondeau É, Drouin S, Bertout L, Lacoste-Julien A, et al. Cancer-related effects on relationships, long-term psychological status and relationship satisfaction in couples whose child was treated for leukemia: A PETALE study. *PloS One*. 2018; 13(9). <https://doi.org/10.1371/journal.pone.0203435> PMID: 30192798
73. Jolin S, Lafontaine MF, Brassard A, Lussier Y. Which comes first? Associations between communication patterns and relationship satisfaction in couples over a 1-year period. *Canadian Journal of Behavioural Science / Revue canadienne des sciences du comportement*. 2022. <https://doi.org/10.1037/cbs0000342>
74. Teo I, Cheng GHI, Tewani K. Relationship satisfaction mediates the association between emotional expressiveness and depressive symptoms among asian women. *Annals of the Academy of Medicine, Singapore*. 2019; 8 (12): 396–402. PMID: 32112064
75. Balzarini RN, Muise A, Zoppolat G, Di Bartolomeo A, Rodrigues DL, Alonso-Ferres M, et al. Love in the time of COVID: Perceived partner responsiveness buffers people from lower relationship quality associated with COVID-related stressors. *Social Psychological and Personality Science*. 2022. <https://doi.org/10.1177/1948550622109443>
76. Bhambhani HP, Chen T, Kasman AM, Wilson-King G, Enemchukwu E, Eisenberg ML. Female sexual function during the COVID-19 pandemic in the United States. *J Sex Med*. 2021; 9(4). <https://doi.org/10.1016/j.jsxm.2021.100355> PMID: 34174585
77. Luetke M, Hensel D, Herbenick D, Rosenberg M. Romantic relationship conflict due to the COVID-19 pandemic and changes in intimate and sexual behaviors in a nationally representative sample of American adults. *J Sex Marital Ther*. 2020; 46(8):747–62. <https://doi.org/10.1080/0092623X.2020.1810185> PMID: 32878584

78. Szuster E, Kostrzevska P, Pawlikowska A, Mandra A, Biernikiewicz M, Kałka D. Mental and sexual health of Polish women of reproductive age during the COVID-19 pandemic—an online survey. *J Sex Med.* 2021; 9(4):100367. <https://doi.org/10.1016/j.esxm.2021.100367> PMID: 34146832
79. Pozza A, Veale D, Marazziti D, Delgado J, Albert U, Grassi G, et al. Sexual dysfunction and satisfaction in obsessive compulsive disorder: Protocol for a systematic review and meta-analysis. *Syst Rev.* 2020; 9(1). <https://doi.org/10.1186/s13643-019-1262-7> PMID: 31918750
80. Berthelot N, Godbout N, Hébert M, Goulet M, Bergeron S. Prevalence and correlates of childhood sexual abuse in adults consulting for sexual problems. *J Sex Marital Ther.* 2014; 40(5):434–43. <https://doi.org/10.1080/0092623X.2013.772548> PMID: 24127985
81. Jaramillo NR, Trillos CE, Julià M. The measure of precarious employment and its impact on the mental health of workers: a systematic review 2007–2020. *Work.* 2022; 73(2):639–50. <https://doi.org/10.3233/WOR-210064> PMID: 35964224
82. Romito P, Grassi M. Does violence affect one gender more than the other? The mental health impact of violence among male and female university students. *Soc Sci Med.* 2007; 65(6):1222–34. <https://doi.org/10.1016/j.socscimed.2007.05.017> PMID: 17576030
83. Brassard A, Dupuy E, Bergeron S, Shaver PR. Attachment insecurities and women's sexual function and satisfaction: The mediating roles of sexual self-esteem, sexual anxiety, and sexual assertiveness. *J Sex Res.* 2015; 52(1):110–9. <https://doi.org/10.1080/00224499.2013.838744> PMID: 24350570
84. Kelly MP, Strassberg DS, Turner CM. Behavioral assessment of couples' communication in female orgasmic disorder. *J Sex Marital Ther.* 2006; 32(2):81–95. <https://doi.org/10.1080/00926230500442243> PMID: 16418102
85. Klapilova K, Brody S, Krejčova L, Husarova B, Binter J. Sexual satisfaction, sexual compatibility, and relationship adjustment in couples: the role of sexual behaviors, orgasm, and men's discernment of women's intercourse orgasm. *J Sex Med.* 2015; 12(3):667–75. <https://doi.org/10.1111/jsm.12766> PMID: 25402432
86. Stephenson K. Exploring the role of sexual avoidance in male sexual dysfunction. *J Sex Res.* 2020; 57(4):522–33. <https://doi.org/10.1080/00224499.2019.1663480> PMID: 31553241
87. Witting K, Santtila P, Varjonen M, Jern P, Johansson A, von der Pahlen B, et al. Female sexual dysfunction, sexual distress, and compatibility with partner. *J Sex Med.* 2008; 5(11):2587–99. <https://doi.org/10.1111/j.1743-6109.2008.00984.x> PMID: 18761584
88. World Health Organization. Measuring sexual health: Conceptual and practical considerations and related indicators. World Health Organization; 2010.
89. Green MS, Naumann RW, Elliot M, Hall JB, Higgins RV, Grigsby JH. Sexual dysfunction following vulvectomy. *Gynecol Oncol.* 2000; 77(1):73–7. <https://doi.org/10.1006/gyno.2000.5745> PMID: 10739693
90. Selvin E, Burnett AL, Platz EA. Prevalence and risk factors for erectile dysfunction in the US. *American Journal of Medicine.* 2007; 120(2):151–7. <https://doi.org/10.1016/j.amjmed.2006.06.010> PMID: 17275456
91. Duralde ER, Rowen TS. Urinary incontinence and associated female sexual dysfunction. *Sex Med Rev.* 2017; 5(4):470–85. <https://doi.org/10.1016/j.sxmr.2017.07.001> PMID: 28827036
92. Laganà AS, La Rosa VL, Rapisarda AM, Valenti G, Sapia F, Chiofalo B, et al. Anxiety and depression in patients with endometriosis: impact and management challenges. *International J Womens Health.* 2017:323–30. <https://doi.org/10.2147/IJWH.S119729> PMID: 28553145
93. Ljungman L, Ahlgren J, Petersson LM, Flynn KE, Weinfurt K, Gorman JR, et al. Sexual dysfunction and reproductive concerns in young women with breast cancer: Type, prevalence, and predictors of problems. *Psychooncology.* 2018; 27(12):2770–2777. <https://doi.org/10.1002/pon.4886> PMID: 30203884
94. Lo SS, Kok WM. Sexual functioning and quality of life of Hong Kong Chinese women with infertility problem. *Hum Fertil.* 2016; 19(4):268–74. <https://doi.org/10.1080/14647273.2016.1238516> PMID: 27706954
95. Basson R, Gilks T. Women's sexual dysfunction associated with psychiatric disorders and their treatment. *Womens Health.* 2018; 14:1745506518762664. <https://doi.org/10.1177/1745506518762664> PMID: 29649948
96. Johnson SD, Phelps DL, Cottler LB. The association of sexual dysfunction and substance use among a community epidemiological sample. *Arch Sex Behav.* 2004 Feb; 33(1):55–63. <https://doi.org/10.1023/B:ASEB.0000007462.97961.5a> PMID: 14739690
97. McCabe MP, Sharlip ID, Lewis R, Atalla E, Balon R, Fisher AD, et al. Risk factors for sexual dysfunction among women and men: a consensus statement from the Fourth International Consultation on Sexual Medicine 2015. *J Sex Med.* 2016; 13(2):153–67. <https://doi.org/10.1016/j.jsxm.2015.12.015> PMID: 26953830